Design Course

Stages in Traditional Hand Drawn Animation

Traditional Hand Drawn Animation
by
Prof. Phani Tetali and Vajra Pancharia
IDC, IIT Bombay

Source:
https://www.dsource.in/course/stages-traditional-hand-drawn-animation

1. Introduction
2. Equipments and Materials
3. Technique
4. Video
5. Contact Details

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Introduction

Traditional-hand-drawn animation process involves animating on a light box and paper. It's completely done on paper, from key frames to cleanup and ink and paint. But nowadays software that are based on the traditional animation process are often used to do clean-ups and ink & paint digitally. This often saves time and helps make the work process efficient.

There are three major steps involved while animating both traditionally and digitally.
They are:

1. Keyframes
2. Breakdown
3. In-betweens

And then, there is clean-up and ink & paint to finish the final look.

Keyframes:
These are the most important drawings or the drawings that define your action strongly. A good animator is aware of how many key drawings or the sufficient key frames that are needed for the required animation. These are often defined as the 'storytelling poses'.

Breakdown:
As the name suggests, Breakdowns helps us to break the action and these are the drawings that helps us work out how to go from one pose to another. Also helping us fins the best transition between two poses. It's also referred to as passing position.

In-betweens:
These are the drawings that come in-between the key-frames and the break-downs. Which can be our eases that provide cushion to the action. More the number of in-between slower the action becomes.

Line Test:
Once your rough animation is complete you need to check the animation for verification of your action. So to check this basic line test setup is required where you place the sheets under a camera and capture it through software which will help you play the animation and view it frame by frame to check the movement. There are various software's available online for line test. One can also use 'Monkey Jam' software for this purpose; it's a open source free software for stop motion and line test.

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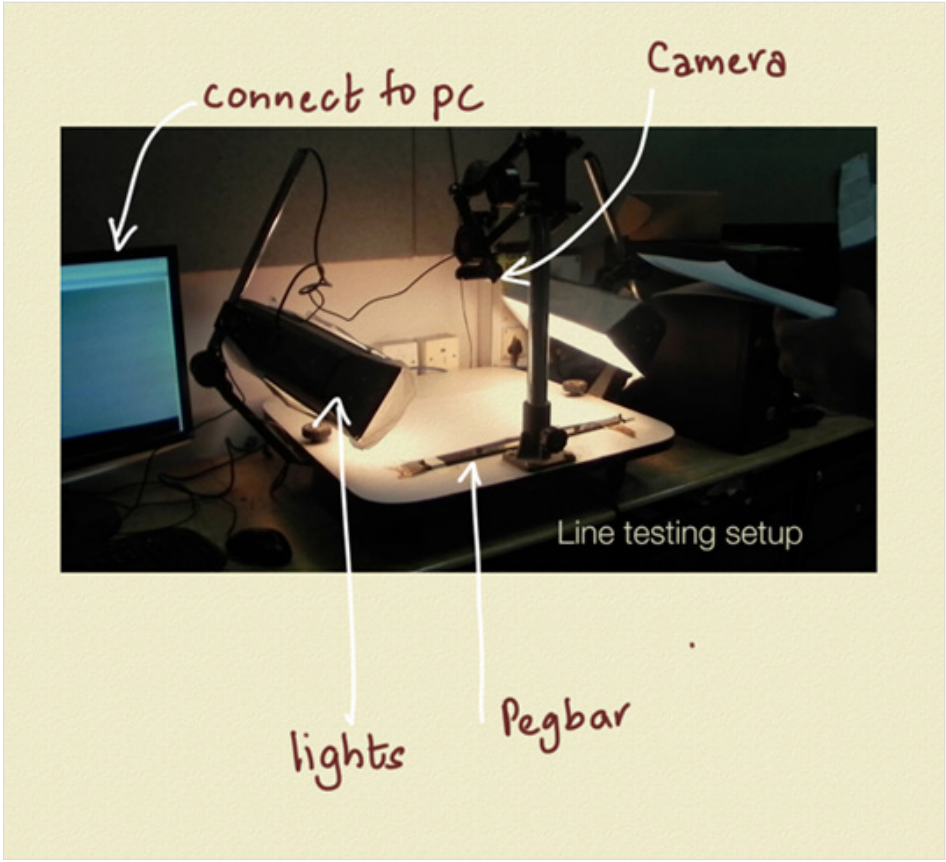

Clean-up:
This is almost at the end of the animation process and probably the most critical and difficult part in the process. Clean-up refers to cleaning the rough drawings/frames made during the process of animation and making them nice precise drawings with only single line strokes so that the ink & paint stage can be comfortably achieved. Since it's really hard to fill colors in the rough drawings directly after scanning them (The software won't fill them because of random gaps and spaces left due to rough strokes). A good clean-up helps fill color easier.

Also, the most important thing to be kept in mind while doing clean-ups is:
'Maintaining the line thickness throughout the drawings' or else, your drawings will wobble in the end due to inconsistent line thickness.

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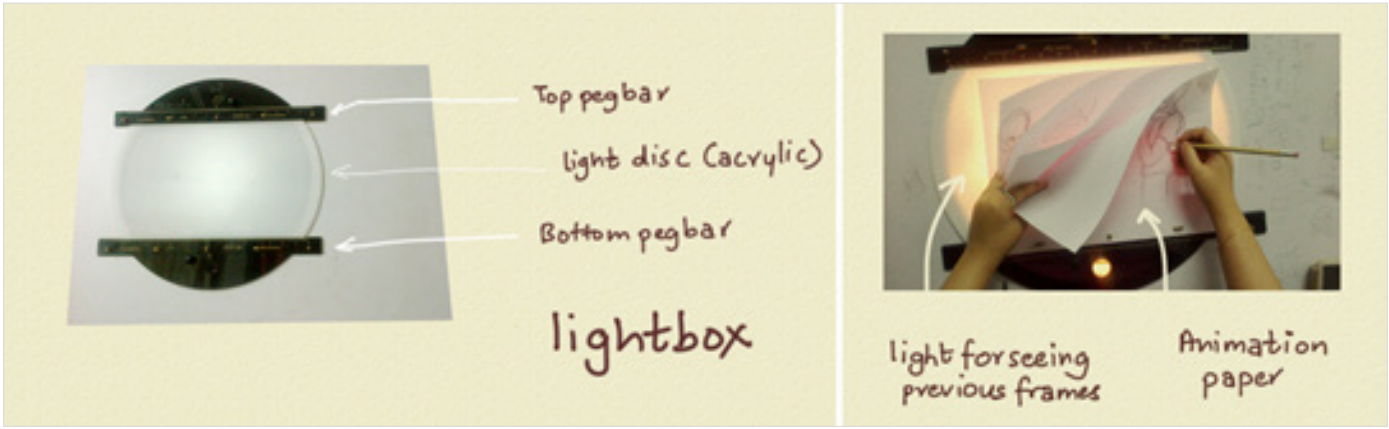
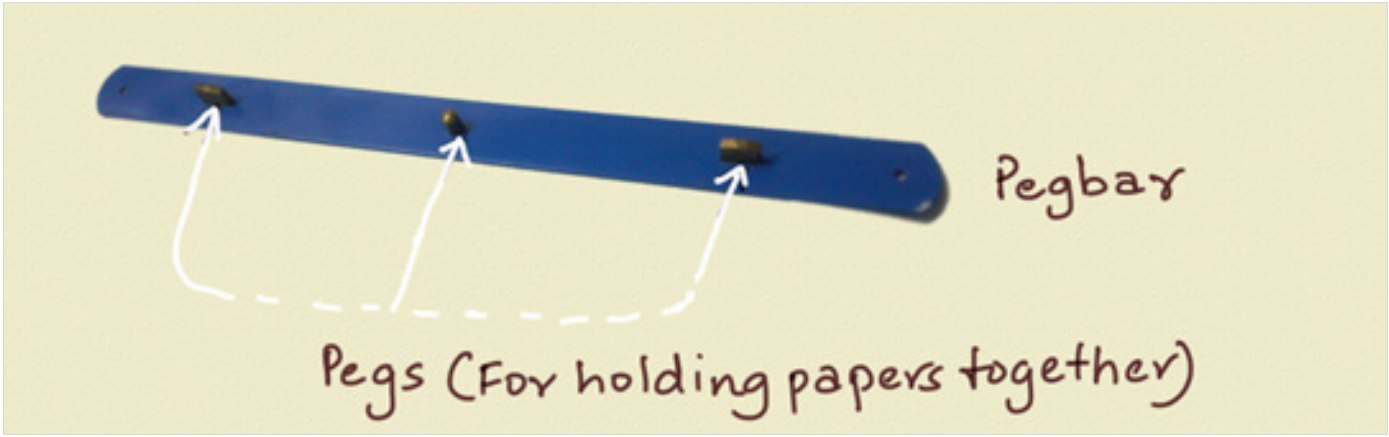
Equipments and Materials

Basic equipments required for doing Animation are:
1. Lightbox
2. Peg Bars
3. Paper Punch
4. Line Testing Set-up

1. Lightbox:



2. Peg Bars:



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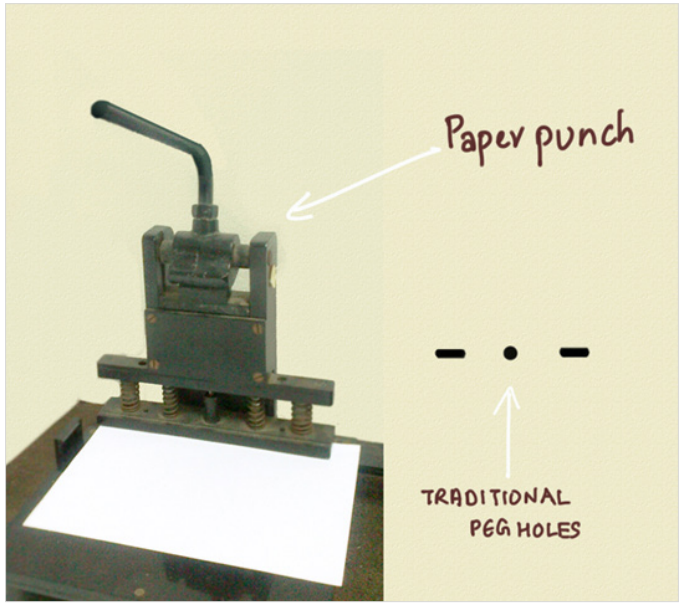
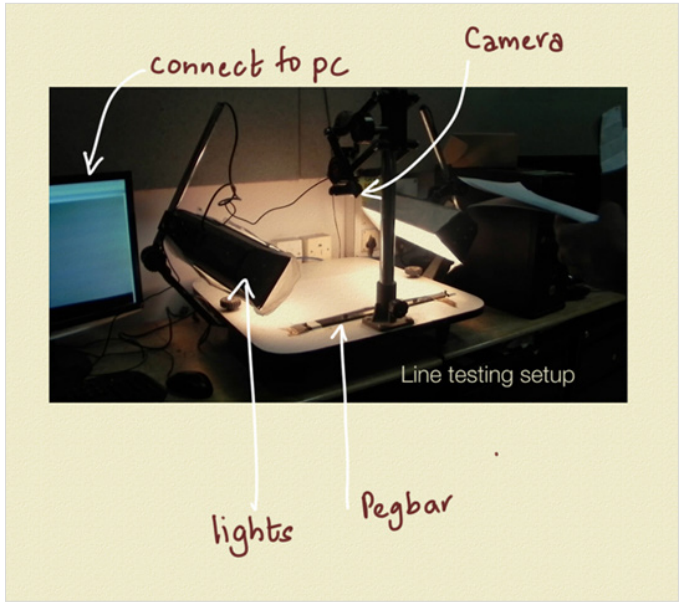
3. Paper Punch:



4. Line Testing Set-up:



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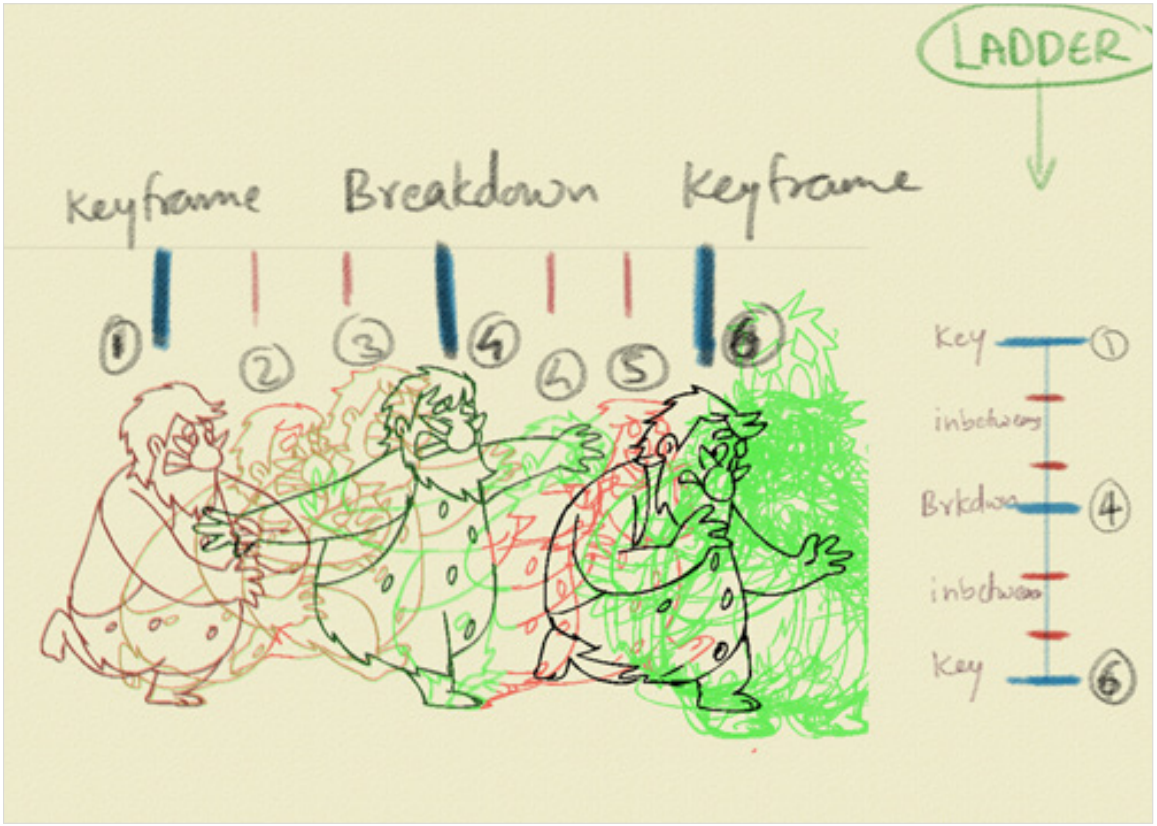
Technique

The technique for 'Traditional-Hand-Drawn Animation' method is as follows:

- Draw your thumbnails for planning the action.
- Drawing the key poses, breakdowns and then the in-betweens.
- Check the line test and comeback to the animation if more frames are needed.

Important Notes to follow while Animating:

- **Drawing Ladders:**
While planning your animation drawing, a ladder helps plan the spacing and timing of your action effectively. It also allows you to chart out just the necessary frames required for the action.



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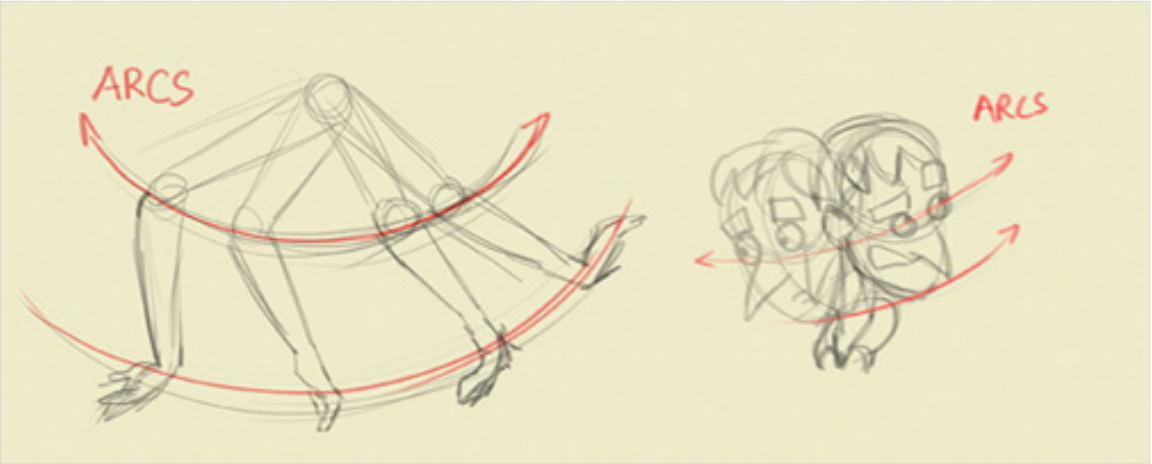
• **Arcs:**
In character animation 'ARCS' are very crucial. In basic human motions like - A head rotation, a walk or any other action, our body does not move in a linear fashion, it follows an arc all the time.

So always animate with arcs in mind, as it will make your actions believable and much richer in its motion.



Also, principles are the key part of animation without which your animation would look lifeless. So principles like anticipation and adding cushion at necessary places in your animation is important. Remember no human action start or stops abruptly, it always starts with anticipation at the beginning and eases or settles down as it ends. So adding a few frames to give a cushion to the actions helps the action look smooth and believable. Also one can play with squash and stretch in a character if necessary.

• **Maintaining Volumes throughout the Animation:**
To keep a check of your volumes keep flipping (as explained in the video).This not only helps you check the volume but also gives you a quick feedback of the motion.

• Refer to the videos for further practical details.

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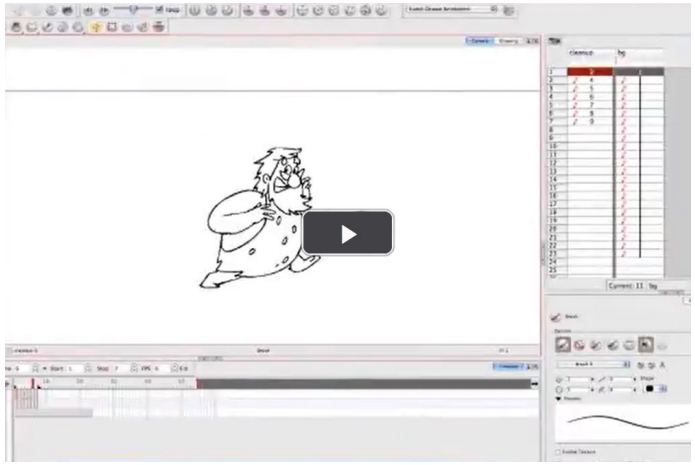
Video

Key Frames

Line Test



Clean-up

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This documentation for the course was done by Vajra Pancharia, IDC, IIT Bombay.

You can get in touch with him at pvajra[at]gmail.com

You can write to the following address regarding suggestions and clarifications:

Helpdesk Details:
Co-ordinator
Project e-kalpa
Industrial Design Centre
IIT Bombay
Powai
Mumbai 400076
India

Phone: 091-22-2159 6805/ 091-22-2576 7802
Email: dsource.in[at]gmail.com